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[redacted]

DCI/IC 73-0884
14 August 1973

MEMORANDUM FOR: [redacted]

SUBJECT : Current Intelligence Operations Improvements

REFERENCE : Memo for the Record; Subj: Meeting on Secure Voice Conferencing, 3 August 1973; dtd 7 August 1973; Secret

1. Per your request [redacted] and I met with [redacted] to discuss improvements for current intelligence operations. This memo will delineate the areas reviewed in order of priority and discuss the status of each item.

2. Watch Officers' Secure Voice Conference Net. [redacted] This capability permits the five operations centers (NSA, CIA, DIA, State & NMCC-JCS) to operate in a secure voice conference mode. Since available equipment (the bridge) was used, only five phones can be conferenced at once; however, since this is a "dial-up" conference (this requires the caller to dial the bridge operator who in turn calls all other conferees), anyone having a gray phone can be included in the conference at the request of the originator. The following modest improvements are to be made to the net: use of an operator headset and hand microphone or AT&T speaker-phone with hand held microphones, telephone line level adjustments, etc. Other more sophisticated improvements will be based upon needs and availability of funds and facilities (see Reference); e.g., making the net a "meet-me" conference (when the caller dials a number the phones of the other conferees will automatically ring). A "crash" type of conference is also being investigated. This is similar to the "meet-me" conference, but it also includes a priority interrupt in the event the phone is already in use. The WHSR will also be included in the Watch Officer Secure Voice Conference Net as soon as their needs are clarified. NSA is preparing the conference set-up procedures. [redacted] is preparing a test and exercise plan which will evolve into a conference procedure document. [redacted] in conjunction with key personnel of the operations centers, will prepare a use procedure document which will delineate minimum conditions necessary for the establishment of a conference call. As soon as these action items have been completed, the net will be operational.

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3. Analysts' Secure Voice Conference Net. This conference net is similar to the Watch Officers' net; however, this net would be used by intelligence community analysts and in conjunction with the IC Text Editing Communications System. It is envisioned that approximately six locations and ten phones could be conferenced at one time. The locations would be as follows: CIA, State, DIA, NSA, NMCC-JCS and the White House. The quickest and most economical solution is the installation of a bridge on the CIA green/gray switch. This would permit conferencing between green and gray phones. Similar improvements discussed above and in the Reference will be considered for this net.

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A Senior Authorities secure voice conferencing net can be developed as required. It is envisioned that this net could be used by WSAG, NSCIC, USIB principals or whomever are designated for this net. The requirements for the capability are lacking not the technology to implement this net. This net would have very stringent control over who is connected to the conference in order to assure the confidentiality of sensitive matters. Depending upon requirements and how the analyst Secure Voice Conference Net is engineered, this net may satisfy the needs of the Senior Authorities.

Action Required. A multi-addressee memorandum should be prepared and sent to the principals proposing the establishment of this analyst net, requesting comments regarding the use of the net and guidance regarding the minimum number of phones required at each agency (no more than two envisioned at this time) and proposed locations. Assuming that approval will be received, a memorandum will be prepared for the Chief, Office of Communications, CIA, requesting Commo to install and maintain this bridge. A simple "meet-me" bridge could cost as little as $4K and probably not more than $25K, assuming that existing phone lines are available at each agency and no new lines will have to be installed. When these action items have been completed, appropriate procedures will be written for the use of this net.

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4. Automatic Dialing Set. Attachment A describes an AT&T Magicall automatic dialing set. It is slightly smaller than a telephone and comes in two versions. One can hold 400 telephone numbers, the other can hold 1,000 numbers. It can be programmed for extension calls, red lines, black lines or long distance calls and it is fast and accurate. A demonstration was arranged for the Chief, CIA Operations Center and a copy of Attachment A was given to him. It appears that an automatic dialer of this type can serve a useful purpose in operations centers where the list of key

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people is long (1,000 names in the CIA telephone list finder) and urgency is great to locate people. The IC secure voice conference call number could also be listed on automatic dialers.

Action Required. The installation of this device has been left to the descretion of the Chief of the CIA Operations Center. This capability will be brought to the attention of the other operations centers.

5. Text Editing Communications Net. We have been investigating the need for and technical approaches that can be taken to improve by expediting, and therefore in some instances provide inputs not otherwise possible within defined time constraints, coordination of action memoranda among members of the intelligence community during crises or periods of increased tensions. We have also considered the use of the capability for daily coordination of CIBs, NIEs, SNIEs, Watch Officer Bulletins, W.O. Summaries or time urgent memoranda/position papers.

There are two basic benefits that can be obtained by achieving this capability; i.e.: (a) an improvement in the coordination process and cycle time, and (b) an improvement in this communications media will assist in bringing the intelligence community closer together.

Growth capabilities for the Text Editing Communications Net would include: (a) file manipulation, to include some of the features on Dough Englebart's SRI system, (b) an ability to connect to the CIA host computer, and (c) an ability to connect to the IDHS, WWMCCS and COINS networks.

The system considered has been sized to have two CRT (Cathode Ray Tubes) and a printer (selectric typewriter) at each of six locations. They are: CIA (also for use by DCI), NSA, State, DIA, JCS and WHSR. An individual at each location would be able to type a document and have it displayed on his CRT. He will be able to insert characters, words, sentences, paragraphs and pages as well as delete the same. The system will automatically left justify and do line wrap-around. He will also be able to transpose characters, words, sentences, paragraphs and pages. When his document is complete he will have the ability to transmit it to one or up to five other locations. Using the analysts' Secure Voice Conferencing net, the IC will be able to discuss the action document and make changes using the CRT. When concurrence has been reached a hard copy can be printed at each location. An interface with a Magnetic Tape Selectric Typewriter (MTST) and a Magnetic Card Selectric Typewriter (MCST) will be options of the system.

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Three different technical approaches for the text editing system have been examined. They are: (a) a stand-alone, essentially point-to-point system; (b) use of a large centralized computer (e.g., [redacted] system; and (c) a small stand-alone computer system--expandable in the number of terminals that can be connected, flexible in that it can be tied to other host computers in a network in the future and with a growth capability to assist the analyst with his job. Approach c is preferred. An investigation/study report is being written which will include cost and capability comparisons and a recommended course of action.

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It is envisioned that the system will operate at the SI/TK level and that appropriate actions and/or waivers will have to be granted for TEMPEST. [redacted]

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Action Required. As soon as the investigation/study report has been written and reviewed in the IC Staff, it is proposed that a multi-addressee memorandum be sent to the agencies discussed above requesting their concurrence in this proposed action. Estimated costs run as low as $200K purchase price for one approach and up to about $12 - 14K/month lease costs for another. It is recommended that the IC Staff fund for this capability with each agency paying for the leased line costs (2400 B/SEC telephone line). After approval has been secured it is proposed that the CPU be installed in CIA Headquarters and that the Office of the Joint Computer Services be assigned responsibility to oversee development, installation and to operate and maintain the system. The Office of Communications would be tasked with the assignment of working with OJCS to coordinate the communications circuits required at each agency. An appropriate memorandum would be prepared for the D/DCI/IC addressed to the Director, OJCS and the Director, OC requesting this action.

When these actions have been completed, appropriate procedures will be written for the use of this net.

6. IC Secure TV Network. Six(6) RCA Globecom Videovoice slow-scan leased TV terminals have been installed at the following locations for a 90 day test period: CIA Operations Center, State Operations Center, NSOC (National SIGINT Operations Center), NPIC (National Photographic Interpretation Center), NMCC (National Military Command Center) - JCS, and the NMIC (National Military Intelligence Center) - DIA. A recommendation will be made prior to 20 September 1973 relative to returning the equipment by 20 October 1973 or retaining the equipment beyond this date.

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Funds for the 90 day test came from IHC/IC funding. If the participating agencies decide to retain the equipment they will individually fund for these terminals. To date the tests have been proceeding quite smoothly; however, it's too early yet to predict the ultimate outcome. The purpose of the test is to determine whether or not there are valid needs for a capability of this type to transmit maps, charts, graphs, textual and imagery between operation centers. The following alternatives are anticipated:

Alt. A - Return equipment to RCA Globecom since no requirement exists at this time.

Alt. B - Retain equipment while a higher resolution (greater than 400 line TV - perhaps 1500 or 2000 lines) - faster (greater than 55 seconds transmission time - perhaps 6 seconds) system is developed.

Alt. C - Retain equipment and request RCA Globecom to make modest improvements (which we would have to fund) to the equipment. (These improvements could include the following: optinnal wide angle, telephoto or zoom lens, TV monitor integral to the TV camera, improved speaker phone, better archival recorder and improved hard copy printer/camera etc.)

Alt. D - Return equipment on the basis that a capability of this sort is required but the equipment has too many deficiencies. Develop an improved system having perhaps 1500 or 2000 line resolution, wide angle telephoto or zoom lens, and faster transmission times or a remote possibility, at this time, would be a need for a real-time closed circuit high resolution TV system.

A limitation of the present system appears to be the quality and reliability and number of phone lines available, at each location, on the gray phone system; therefore, some of the alternatives above may include improvements to the communications system.

Action Required. At this time no action is required.

7. Improved LDX. The present WASHFAX LDX operates over 50KB/SEC lines, It will only transmit textual material (no shades of gray - black or white) having a resolution of 200 l.p.i. @ 90 seconds transmission time. Attachment B is a specification sheet and description of the DACOM Model 412 Securefax unit. It can transmit with a resolution of 200 l.p.i. @ 90 seconds over a normal telephone line (4800/2400 B/SEC). This means the O&M costs are lower for a system having the same resolution and same transmission time. 25X

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I have been told that CIA is buying some of these units for overseas installations.

Action Required. It is proposed that a meeting with CIA-OC, DCA and other appropriate personnel be held to review existing plans to update WASHFAX and to consider the use of DACOM or similar "LDX" type units. Based upon the outcome of this meeting appropriate recommendations will be made.

8. IC Secure Facsimile System. Attachment C is a photograph received over a DATALOG - LITTON Systems facsimile terminal. The quality of the photograph is excellent. The transmission rate is approximately three minutes with a resolution of 100 lines per inch. A facsimile system of this type could service the Intelligence Community if it can be shown that there are cost benefits to be derived from this capability. The system is to be installed in a simplex configuration with the transmitter at NPIC and the receiver at the State Department Operations Center for a 30 day test period. I have made tentative arrangements, contingent upon key people witnessing the test, to have the receive terminal moved to the CIA Operations Center for an additional 30 day test period. This system could complement the IC Secure TV System. That is, a photograph could be viewed on the TV screen and if a hard copy is required it could be transmitted via the facsimile system.

Action Required. None at this time. We will continue to monitor the status of the LITTON development and other facsimile systems. If it appears advantageous arrangements will be made to have the LITTON System receive terminal installed in the CIA Operations Center for a 30 day test.

9. Electrowriter. There are a couple of devices that would permit using an overlay paper on top of a CIB type map and write alpha-numerics or draw lines that would be transmitted to a remote site having a similar set-up. One concept would be to acoustically couple this equipment to the gray phone system. This would permit operation center watch officers to communicate in this manner in addition to verbally discussing the items drawn on an overlay.

Action Required. We are obtaining additional technical data on devices of this type. Discussions will be held with IC agencies personnel on the worth of this capability. Possible recommendations could include purchasing devices of this type (approximately $1,650 each for a small format unit) or leasing units for a 90 day test with the option to buy or continue to lease.

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10. IC Communications Improvements. All of the ten items discussed above will require some additional communications or improvements to existing communications systems. Some of these additions/improvements can be handled on a case-by-case basis. Depending upon the actions forthcoming an overall improvement plan for the systems communications should be developed.

Action Required. None at this time. It is proposed in the reorganization plan for the IHC (Intelligence Information Handling Committee) that the ad hoc USIB Telecommunications Working Group be integrated into the IHC. If this is done this will be the group that will develop a comprehensive telecommunications plan.

11. Summary. It is recommended that all of the items discussed above be acted upon according to the suggestions in each paragraph.

Action Required. These actions can be accomplished under the guidance of the IHC per the proposed reorganization plans submitted to the D/DCI/IC, the DD/DCI/IC and Mr. Pagnotta. Should the decision be made to retain the IHC as a USIB committee, the actions recommended above could also be performed by the IHC in conjunction with the PRG. Somewhat similar studies encompassing these areas have been conducted in the past by the IHC (IWIN - Indications & Warning Intelligence - Study, IDEW - Intelligence Data Exchange Washington - Study and TETRAHEDRON - Telecommunications Study); however no decisions were made regarding the study recommendations by the IHC or USIB.

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Chief, IHC/SS

cc: [redacted]

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